

## II. CLAIM AMENDMENTS

1. (Currently Amended) A method for determining a reference level for automatic gain control of a radio frequency signal to be received, ~~particularly~~ the signal having a varying signal strength, ~~in which method~~ comprising:

receiving radio blocks ~~are received~~ on a logical packet data traffic channel of a the signal, which radio blocks have been transmitted with a predetermined transmission power and by using a predetermined way of controlling the transmission power,

determining continuously ~~wherein~~ said reference level ~~is continuously determined~~ on the basis of correctly received, i.e., valid radio blocks of the logical packet data traffic channel, and

correcting ~~wherein the~~ said reference level on the basis of the signal strength measured during the reception of each valid radio block.

2. (Currently Amended) A method according to claim 1, ~~wherein~~  
comprising:

correcting the reference level ~~is corrected~~ by calculating  
~~it's~~ a running average of the reference level with respect to  
time.

3. (Currently Amended) A method according to claim 2, ~~wherein~~  
comprising:

calculating the running average ~~is calculated~~ by using  
filtering with a variable length, wherein ~~the~~ a period, during  
which the running average is calculated, is preferably ~~kept~~  
constant, depending on the frequency of occurrence of the  
valid radio blocks.

4. (Currently Amended) A method according to claim 2, ~~wherein~~  
comprising:

calculating, by using the running average, a predetermined  
number of the valid radio blocks ~~is calculated~~ as a forgetting  
factor.

5. (Currently Amended) A method according to claim 1, ~~wherein~~  
comprising:

receiving a signal of a broadcasting channel ~~is received~~,  
which ~~is~~ signal of the broadcasting channel has been

transmitted at a predetermined constant transmission power,  
and ~~that~~

correcting the reference level ~~is corrected~~ on the basis of  
~~the~~ a signal strength of the broadcasting channel measured  
during the reception of the signal of ~~this~~ the broadcasting  
channel, if ~~no~~ the valid radio blocks ~~have~~ has not been  
received during ~~the~~ a predetermined period of time.

6. (Currently Amended) A method according to claim 5,  
comprising:

~~wherein~~ calculating ~~the~~ a running average of the signal  
strength of the broadcasting channel ~~is calculated~~ with  
respect to time.

7. (Currently Amended) A method according to claim 6,  
comprising:

~~wherein~~ calculating filtering with a variable length ~~is~~  
~~calculated~~ by using the running average of the signal strength  
of the broadcasting channel.

8. (Currently Amended) A method according to claim 5, wherein  
said broadcasting channel is the BCCH channel of the GPRS net-  
work.

9. (Currently Amended) A method according to claim 5,  
comprising:

~~wherein~~ determining the signal strength of the broadcasting channel ~~is determined~~ by using samples taken from the signal of the broadcasting channel.

10. (Currently Amended) A method according to claim 1,  
comprising:

~~wherein~~ selecting, for the determination, such valid radio blocks ~~are selected~~ which are received at intervals of a predetermined period, for synchronization of the receiver and ~~the~~ a communication network.

11. (Currently Amended) A method according to claim 5, wherein said predetermined period of time is a period comprising 18 successive radio blocks in the GPRS network.

12. (Currently Amended) A method according to claim 5,  
comprising:

~~wherein~~ compensating, on the basis of ~~the~~ a transmission power information contained in the valid radio block, the measured signal strength of the radio block ~~is compensated~~ to a predetermined level which is proportional to the signal strength of the broadcasting channel, when the transmission power ~~levels~~ of the radio blocks vary.

13. A method according to claim 1, comprising:

~~wherein~~ interpreting ~~the—address~~ information and the transmission power information contained in the valid radio block ~~are—interpreted~~ to determine ~~the~~ a recipient of the radio block and the ~~used~~ transmission power used, respectively.

14. (Currently Amended) A method according to claim 13, comprising:

~~wherein~~ selecting, for the determination, such valid radio blocks ~~are—selected~~ which are addressed to a specific recipient and which contain transmission power information, when the transmission power varies between recipients and the transmission power of the radio blocks vary.

15. (Currently Amended) A method according to claim 13, comprising:

~~wherein~~ selecting, for the determination, such valid radio blocks ~~are—selected~~ which are addressed to different recipients and which contain transmission power information, when the transmission power remains the same among recipients and the transmission power of the radio blocks vary.

16. (Currently Amended) A method according to claim 1,  
comprising:

~~wherein~~ selecting, for the determination, such valid radio blocks ~~are—selected~~ which are addressed to different recipients, when the transmission powers remains the same among recipients and the transmission power of the radio blocks remain constant.

17. (Currently Amended) A method according to claim 1,  
comprising:

~~wherein~~ correcting the reference level ~~is—corrected~~ on the basis of the maximum signal strength measured from incorrectly received radio blocks, if, within a predetermined period of time, no valid radio blocks have been received during the maximum interval of occurrence of ~~the~~ reference blocks.

18. (Currently Amended) A method according to claim 1,  
comprising:

~~wherein~~ correcting the reference level ~~is—corrected~~ by a predetermined value, when clipping has occurred in the reception of ~~a~~ the valid radio block when the signal strength is below a set minimum limit or above a set maximum limit.

19. (Currently Amended) `A method according to claim 1,  
comprising:

~~wherein~~ receiving radio blocks ~~are received~~ on two or more logical packet data traffic channels, which radio blocks have been transmitted at a predetermined transmission power and by using a predetermined method of transmission power control, and

~~that~~ determining continuously said reference level ~~is continuously determined~~ on the basis of valid radio blocks and for each of said logical packet data traffic channels.

20. (Currently Amended) A method according to claim 1,  
comprising:

~~wherein~~ using a wireless communication unit ~~is used~~ to receive the valid radio blocks transmitted by a base transceiver station of a packet switched communication network based on a cellular system.

21. (Currently Amended) A method according to claim 20,  
comprising:

~~wherein~~ measuring the signal strength ~~level of the~~ an analog signal received in said wireless communication unit ~~is measured~~, and

correcting the signal gain ~~is corrected~~ on the basis of the determined reference level.

22. (Currently Amended) A method according to claim 1, wherein said logical packet data traffic channel is the PDTCH/D channel of the GPRS network.

23. (Currently Amended) A method according to claim 1, wherein said ~~control method~~ predetermined way is constant power control used by the GPRS network in downlink data transmission, power control according to mode A, or power control according to mode B.

24. (Currently Amended) A device for determining a reference level for automatic gain control of a radio frequency signal to be received, particularly the signal having a varying signal ~~which device comprises~~ strength, comprising:

means for receiving, on a logical packet data traffic channel of ~~a~~ the signal, radio blocks which have been transmitted with a predetermined transmission power and by using a predetermined way of controlling the transmission power, ~~wherein the device comprises~~

means for continuous determination of said reference level on the basis of correctly received i.e., valid radio blocks of the logical packet data traffic channel, wherein said means are arranged to correct ~~the~~ said reference level on the basis of the signal strength measured during the reception of each valid radio block.



25. (Currently Amended) A device according to claim 24, wherein the device further comprises:

means for receiving ~~the~~ a signal of a broadcasting channel, which signal of the broadcasting channel has been transmitted at a predetermined constant transmission power, and ~~that~~ wherein said means are further arranged to correct the reference level on the basis of ~~the~~ a signal strength of the broadcasting channel measured during the reception of ~~this~~ the signal of the broadcasting channel, if ~~no~~ the valid radio block ~~have~~ has not been received during ~~the~~ a predetermined period of time.

26. (Currently Amended) A device according to claim 24, wherein the device further comprises:

means for measuring the signal strength ~~level~~ of a received analog signal, ~~and that~~ wherein said means are further arranged to correct the signal gain on the basis of the determined reference level at predetermined intervals.

27. (Original) A device according to claim 24, wherein said device is a wireless communication unit operating in the GPRS network.

28. (Currently Amended) A device according to claim 25, wherein the device further comprises:

means for measuring the signal strength ~~level~~ of a received analog signal, and ~~that~~ wherein said means are further arranged to correct the signal gain on the basis of the determined reference level at predetermined intervals.

29. (Currently Amended) A method according to claim 3, ~~wherein~~ comprising:

calculating, by using the running average, a predetermined number of the valid radio blocks ~~is calculated~~ as a forgetting factor.

30. (Currently Amended) A method according to claim 5, ~~wherein~~ comprising:

selecting, for the determination, such valid radio blocks ~~are selected~~ which are received at intervals of a predetermined period, for synchronization of the receiver and ~~the~~ a communication network.

31. (Currently Amended) A method according to claim 10, wherein said predetermined period of time is a period comprising 18 successive radio blocks in the GPRS network.

32. (Currently Amended) A method according to claim 10,  
wherein comprising:

compensating, on the basis of ~~the~~ a transmission power information contained in the valid radio block, the measured signal strength of the radio block ~~is compensated~~ to a predetermined level which is proportional to the signal strength of the broadcasting channel, when the transmission power ~~levels~~ of the radio blocks vary.

33. (Currently Amended) A method according to claim 10,  
wherein comprising:

interpreting ~~the~~ address information and ~~the~~ transmission power information contained in the valid radio block ~~are interpreted~~ to determine ~~the~~ a recipient of the ~~used~~ radio block and the transmission power use, respectively.